Baiheng Ma,[1,2] Baoli Yao,[1,a]] Tong Ye,[1] and Ming Lei[3]
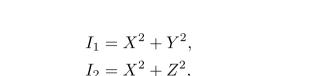[1]State Key Laboratory of Transient Optics and Photonics, Xi'an Institute of Optics and Precision Mechanics, Chinese Academy of Sciences, Xi'an 710119, China
[2]Graduate School of the Chinese Academy of Sciences, Beijing 100039, China
[3]College of Life Science and Shaanxi Key Laboratory of Molecular Biology for Agriculture, Northwest A&F University, Yangling 712100, People's Republic of China

2. Despejar X^2, Y^2, Z^2, y W^2

$$I_1 = X^2 + Y^2,$$
$$I_2 = X^2 + Z^2,$$
$$I_3 = X^2 + W^2.$$

$$X^2 + Y^2 + Z^2 + W^2 = 1$$

$$\longrightarrow$$

$$X^2 = \frac{1}{2}\left(I_1 + I_2 + I_3 - 1\right),$$
$$Y^2 = \frac{1}{2}\left(I_1 - I_2 - I_3 + 1\right),$$
$$Z^2 = \frac{1}{2}\left(I_2 - I_1 - I_3 + 1\right),$$
$$W^2 = \frac{1}{2}\left(I_3 - I_1 - I_2 + 1\right).$$